IN THE CLAIMS

The state of claims is as follows:

1. (Currently Amended) An eddy current brake mechanism comprising:

a fixed linear array of permanent magnets;

a moveable linear array of permanent magnets disposed in a parallel relationship with said fixed linear array of permanent magnets;

a diamagnetic or non-magnetic member disposed for parallel movement between the fixed and moveable linear arrays of magnets; and

apparatus for adjusting braking force against the member parallel movement, by parallel movement of said movable linear array of permanent magnets as a function of velocity of the member between the magnet arrays.

2. (Original) The brake mechanism according to claim 1 wherein the apparatus comprises an actuator disposed in an operational relationship with said movable linear array of permanent magnets.

3. (Currently Amended) The brake mechanism according to claim 1 wherein the apparatus comprises a spring attached to said movable linear array of permanent magnets ~~for enabling the lateral movement of the moveable linear array to be a function of velocity of the member between the magnet arrays~~.

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (New) The brake mechanism according to claim 1 wherein the fixed and moveable permanent magnet arrays are Halbach arrays.

10. (New) The brake mechanism according to claim 9 wherein the Halbach array of the fixed and moveable permanent magnet are aligned with one another for maximum braking.

11. (New) The brake mechanism according to claim 2 wherein said actuator comprises a pneumatic actuator.

12. (New) The brake mechanism according to claim 2 wherein said actuator comprises a electric motor.

13. (New) The brake mechanism according to claim 1 wherein said lateral movement includes movement of the moveable array up to ½ wavelength to minimize the braking force.